

AMENDMENTS TO THE SPECIFICATION

Please enter the attached paper copy form of Sequence Listing to replace the Sequence Listing filed on July 2, 2007.

Please replace table 3 on page 23 with the following amended table:

TABLE 3
MODIFICATIONS IDENTIFIED IN THE HUMAN LENS CRYSTALLIN

Modification ^a	Nominal Mass Shift ^b	Present invention/ Peaks Identified Sites ^c	ProteinLynx/ AutoMod Identified Sites ^d	Example Present invention Alignment ^e
N-Terminal Carbamylation	43	12	7	NYR(L)VVFELENFQGRRAE (SEQ ID NO:1) X ([156.1])VVFELENFQGR (SEQ ID NO:2)
Methylation of Cysteine	14	4	0	GRR(YD) (Cc) D (Cc) DCADFHTYLSRCNS XX (SEQ ID NO:3) ([278.1]) (Cc) D (Cc) TMADFHTYLSR (SEQ ID NO:4)
N-Terminal Acetylation	42	2	2	MDIAIH(PW)IRRPF (SEQ ID NO:5) X: SSNLALHH(APD)LR (SEQ ID NO:6)
Formation of Pyroglutamic acid	-17/-18	2	0	VKVQDDFVEIHGKHNE (SEQ ID NO:7) :X EPDFVELHGK (SEQ ID NO:8)
Formation of Succinimide	-17	1	1	NYRLVVFELLENF(Q)GRRAE (SEQ ID NO:9) X LVVFELEPF([128.1])GR (SEQ ID NO:10)
N-Terminal Acetylation and Oxidation of Methionine	42 and 16	1	0	MD(V)TI(Q)HP(W)FKRTL (SEQ ID NO:11) X ([403.2])TL([128.1])HP([186.1])FK

Please replace paragraph [0035] on page 7 with the following amended paragraph:

Figure 6 illustrates an embodiment of the present invention where, for each local alignment, all possible combinations of the next three masses in each sequence (database SEQ ID NO:12 versus de novo SEQ ID NO:13) are compared sequentially with a breadth-first search algorithm.

Please replace paragraph [0036] on page 7 with the following amended paragraph:

Figure 7 illustrates an embodiment of the present invention where a *de novo* sequence (SEQ ID NO:14) generated by Peaks from one MS/MS spectrum aligns to bovine serum albumin (SEQ ID NO:15) with significant homology.

Please replace paragraph [0039] on page 7 with the following amended paragraph:

Figure 10 illustrates an embodiment of the present invention that aligns de novo sequence (SEQ ID NO:16) to the lactotransferrin protein (SEQ ID NO:17).